

## Certification Requirements for the MMO-MUG Coliform Analysis Procedure

Should a laboratory wish to become certified to perform one of the MMO-MUG test procedures, the following documentation will be required by the Program:

- 1) A completed application form.
- 2) A Standard Operating Procedure (SOP) written as the laboratory is performing the MMO-MUG analysis. The following items must be addressed in the SOP:
  - a) The wattage of the long wave fluorescent ultraviolet lamp (must be at least six watts).
  - b) The water supply used must be sterilized deionized or distilled (not buffered dilution water) produced in-house or purchased from a laboratory supply vendor. Reagent water quality control checks listed in the EPA's Drinking Water Manual do not have to be performed if the water used is of the quality mentioned above.
  - c) The collection/culture vessel (must be borosilicate glass or equivalent and cannot autofluoresce).
  - d) The use and active life of the color/fluorescence comparator.
- 3) At least five (5) sample sets of data (with the pertinent analysis records) must be provided for review. Each sample set must consist of:
  - a) One sample from a known positive source (surface water, wastewater, etc.).
  - b) One sample from a known negative source (finished water).

\* Each sample must be analyzed by the MMO-MUG test procedure of choice and the known positive samples must be collected at different locations or on different days at the same location.

Any laboratory performing the MMO-MUG test procedure must check each lot of media received into the laboratory by using known cultures of microorganisms before that lot is used for compliance monitoring purposes. Escherichia coli is the organism of choice as the positive control. Pseudomonas aeruginosa is the organism of choice as the negative control. Klebsiella pneumoniae is the organism of choice for producing the total coliform positive/E.coli negative (yellow color produced but sample does not fluoresce) control. Sterile deionized/distilled water must be pipetted into a single vessel of media and incubated as a sterility control.

Please be reminded that the MMO-MUG medium has a shelf-life of twelve months from the date of manufacture and not the date of receipt into the laboratory. Laboratories are encouraged to pay special attention to the manufacturer's listed expiration date for each box/lot of media received into the laboratory. Also, the color comparator has a shelf-life of one year from the date of manufacture.

On a weekly basis, or each time that the MMO-MUG medium is used, sterile deionized/distilled water must be pipetted into one vessel of the MMO-MUG medium, inoculated with growth from a living agar slant of Escherichia coli and incubated as a known positive control or a known positive sample may be incubated (stream, creek, wastewater). On a weekly basis or each time that the MMO-MUG medium is used, sterile deionized/distilled water must be pipetted into a single vessel of the MMO-MUG medium and incubated as a sterility control.

Should you have questions about the information listed herein, please contact the Environmental Laboratory Certification Program at 935-7025.